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      Sommergruber, Wolfgang
      Abseher, Roger

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Val Ile Glu Ile Gln Lys Asn Ile Asp Cys Met Ser Gly Pro Cys Pro
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Asn Arg Thr Phe Ile Trp Asp Val Lys Ala His Lys Ser Ile Gly Leu
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Glu Leu Gln Phe Ser Ile Pro Arg Leu Arg Gln Ile Gly Pro Gly Glu
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Ser Cys Pro Asp Gly Val Thr His Ser Ile Ser Gly Arg Ile Asp Ala
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Thr Val Val Arg Ile Gly Thr Phe Cys Ser Asn Gly Thr Val Ser Arg
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His Pro Arg Asn Val Ser Gly Phe Ser Ile Ala Asn Arg Ser Ser Ile
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Thr Leu Met Ser Ala Asn Tyr Pro Glu Gly Phe Pro Glu Asp Glu Leu
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Glu Asp Lys Gln Pro Gly Asn Met Ala Gly Asn Phe Asn Leu Ser Leu
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caa ggc tgt gac caa gat gcc caa agt cca ggg atc ctc cgg ctg cag  1003
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gtg gtt gac ttg agt aat gag cga gcc atg tca ctc acc atc gag cca  1099
Val Val Asp Leu Ser Asn Glu Arg Ala Met Ser Leu Thr Ile Glu Pro
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cgg ccc gtc aaa cag agc cgc aag ttt gtc cct ggc tgt ttc gtg tgt  1147
Arg Pro Val Lys Gln Ser Arg Lys Phe Val Pro Gly Cys Phe Val Cys
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aaa cac aaa atc tcc ttc ctt tgt gat gat ctg aca cgt ctg tgg atg  1243
Lys His Lys Ile Ser Phe Leu Cys Asp Asp Leu Thr Arg Leu Trp Met
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Asn Val Glu Lys Thr Ile Ser Cys Thr Asp His Arg Tyr Cys Gln Arg
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aaa tcc tac tca ctc cag gtg ccc agt gac atc ctc cac ctg cct gtg  1339
Lys Ser Tyr Ser Leu Gln Val Pro Ser Asp Ile Leu His Leu Pro Val
360                 365                 370                 375

gag ctg cat gac ttc tcc tgg aag ctg ctg gtg ccc aag gac agg ctc  1387
Glu Leu His Asp Phe Ser Trp Lys Leu Leu Val Pro Lys Asp Arg Leu
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Lys Pro Cys Asn Thr Ser Phe Ser Tyr Leu Val Ala Ser Ala Ile Pro
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Ser Gln Asp Leu Tyr Phe Gly Ser Phe Cys Pro Gly Gly Ser Ile Lys
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cag atc cag gtg aag cag aac atc tcg gtg acc ctt cgc acc ttt gcc   1579
Gln Ile Gln Val Lys Gln Asn Ile Ser Val Thr Leu Arg Thr Phe Ala
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ccc agc ttc caa caa gag gcc tcc agg cag ggt ctg acg gtg tcc ttt   1627
Pro Ser Phe Gln Gln Glu Ala Ser Arg Gln Gly Leu Thr Val Ser Phe
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ata cct tat ttc aaa gag gaa ggc gtt ttc acg gtg acc cct gac aca   1675
Ile Pro Tyr Phe Lys Glu Glu Gly Val Phe Thr Val Thr Pro Asp Thr
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aaa agc aag gtc tac ctg agg acc ccc aac tgg gac cgg ggc ctg cca   1723
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tcc ctc acc tct gtg tcc tgg aac atc agc gtg ccc aga gac cag gtg   1771
Ser Leu Thr Ser Val Ser Trp Asn Ile Ser Val Pro Arg Asp Gln Val
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gcc tgc ctg act ttc ttt aag gag cgg agc ggc gtg gtc tgc cag aca   1819
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ggg cgc gca ttc atg atc atc cag gag cag cgg acc cgg gct gag gag   1867
Gly Arg Ala Phe Met Ile Ile Gln Glu Gln Arg Thr Arg Ala Glu Glu
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atc ttc agc ctg gac gag gat gtg ctc ccc aag cca agc ttc cac cat   1915
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cag cta gac ctg ctc ttc tcg gtg aca ctt acc cca agg act gtg gac   2011
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Thr Asn Lys Gly Pro Ala Val Gly Ile Tyr Asn Gly Asn Ile Asn Thr
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act ccc atg tgt atg cag tca tcg agg aca cca tgg tat atg ggc atc   2251
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Pro Tyr Ala Pro Gly Pro Gln Leu Gln Ser Trp Pro Leu Arg Ser His
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Ile Pro Thr Met Gly Met
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Cys Met Ser Gly Pro Cys Pro Phe Gly Glu Val Gln Leu Gln Pro Ser
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Thr Ser Leu Leu Pro Thr Leu Asn Arg Thr Phe Ile Trp Asp Val Lys
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Ala His Lys Ser Ile Gly Leu Glu Leu Gln Phe Ser Ile Pro Arg Leu
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Arg Gln Ile Gly Pro Gly Glu Ser Cys Pro Asp Gly Val Thr His Ser
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Ile Ser Gly Arg Ile Asp Ala Thr Val Val Arg Ile Gly Thr Phe Cys
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Ser Asn Gly Thr Val Ser Arg Ile Lys Met Gln Glu Gly Val Lys Met
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Ala Leu His Leu Pro Trp Phe His Pro Arg Asn Val Ser Gly Phe Ser
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Phe Glu Gly Glu Gly Gly Ser Ala Thr Leu Met Ser Ala Asn Tyr Pro Glu
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Gly Phe Pro Glu Asp Glu Leu Met Thr Trp Gln Phe Val Val Pro Ala
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Asp Leu Thr Arg Leu Trp Met Asn Val Glu Lys Thr Ile Ser Cys Thr
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Asp His Arg Tyr Cys Gln Arg Lys Ser Tyr Ser Leu Gln Val Pro Ser
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Asp Ile Leu His Leu Pro Val Glu Leu His Asp Phe Ser Trp Lys Leu
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Gln Gly Leu Thr Val Ser Phe Ile Pro Tyr Phe Lys Glu Glu Gly Val
465             470             475             480

Phe Thr Val Thr Pro Asp Thr Lys Ser Lys Val Tyr Leu Arg Thr Pro
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Asn Trp Asp Arg Gly Leu Pro Ser Leu Thr Ser Val Ser Trp Asn Ile
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Ser Val Pro Arg Asp Gln Val Ala Cys Leu Thr Phe Phe Lys Glu Arg
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Ser Gly Val Val Cys Gln Thr Gly Arg Ala Phe Met Ile Ile Gln Glu
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Pro Lys Pro Ser Phe His His His Ser Phe Trp Val Asn Ile Ser Asn
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Gly Gly Gly Val Leu Leu Leu Ser Ala Leu Gly Leu Ile Ile Cys Cys
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Val Lys Lys Lys Lys Lys Lys Thr Asn Lys Gly Pro Ala Val Gly Ile
625             630             635             640

Tyr Asn Gly Asn Ile Asn Thr Glu Met Pro Gly Ser Gln Lys Ser Phe
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Arg Lys Gly Glu Arg Thr Met Thr Pro Met Cys Met Gln Ser Ser Arg
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Thr Pro Trp Tyr Met Gly Ile Cys Tyr Arg Ile Pro Ala Ala Pro Ser
        675             680             685

Cys Ser Gln Arg Trp Thr Pro Thr Gly Arg Ser Arg Ala Pro Trp Gly
    690             695             700

Ser Val Leu Pro Pro His Pro Pro Tyr Ala Pro Gly Pro Gln Leu Gln
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Ala Arg Leu Pro Arg Gly Ala Glu Ala Phe Glu Ile Ala Leu Pro Arg
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gaa agc aac att aca gtt ctc ata aag ctg ggg acc ccg act ctg ctg  438
Glu Ser Asn Ile Thr Val Leu Ile Lys Leu Gly Thr Pro Thr Leu Leu
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gca aaa ccc tgt tac atc gtc att tct aaa aga cat ata acc atg ttg  486
Ala Lys Pro Cys Tyr Ile Val Ile Ser Lys Arg His Ile Thr Met Leu
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tcc atc aag tct gga gaa aga ata gtc ttt acc ttt agc tgc cag agt  534
Ser Ile Lys Ser Gly Glu Arg Ile Val Phe Thr Phe Ser Cys Gln Ser
    70                  75                  80

cct gag aat cac ttt gtc ata gag atc cag aaa aat att gac tgt atg  582
Pro Glu Asn His Phe Val Ile Glu Ile Gln Lys Asn Ile Asp Cys Met
 85                  90                  95                 100

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Leu Leu Pro Thr Leu Asn Arg Thr Phe Ile Trp Asp Val Lys Ala His
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Ile Gly Pro Gly Glu Ser Cys Pro Asp Gly Val Thr His Ser Ile Ser
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ggc cga atc gat gcc acc gtg gtc agg atc gga acc ttc tgc agc aat    822
Gly Arg Ile Asp Ala Thr Val Val Arg Ile Gly Thr Phe Cys Ser Asn
165                    170                    175                    180

ggc act gtg tcc cgg atc aag atg caa gaa gga gtg aaa atg gcc tta    870
Gly Thr Val Ser Arg Ile Lys Met Gln Glu Gly Val Lys Met Ala Leu
                185                    190                    195

cac ctc cca tgg ttc cac ccc aga aat gtc tcc ggc ttc agc att gca    918
His Leu Pro Trp Phe His Pro Arg Asn Val Ser Gly Phe Ser Ile Ala
                200                    205                    210

aac cgc tca tct ata aaa cgt ctg tgc atc atc gag tct gtg ttt gag    966
Asn Arg Ser Ser Ile Lys Arg Leu Cys Ile Ile Glu Ser Val Phe Glu
        215                    220                    225

ggt gaa ggc tca gca acc ctg atg tct gcc aac tac cca gaa ggc ttc   1014
Gly Glu Gly Ser Ala Thr Leu Met Ser Ala Asn Tyr Pro Glu Gly Phe
        230                    235                    240

cct gag gat gag ctc atg acg tgg cag ttt gtc gtt cct gca cac ctg   1062
Pro Glu Asp Glu Leu Met Thr Trp Gln Phe Val Val Pro Ala His Leu
245                    250                    255                    260

cgg gcc agc gtc tcc ttc ctc aac ttc aac ctc tcc aac tgt gag agg   1110
Arg Ala Ser Val Ser Phe Leu Asn Phe Asn Leu Ser Asn Cys Glu Arg
                265                    270                    275

aag gag gag cgg gtt gaa tac tac atc ccg ggc tcc acc acc aac ccc   1158
Lys Glu Glu Arg Val Glu Tyr Tyr Ile Pro Gly Ser Thr Thr Asn Pro
                280                    285                    290

gag gtg ttc aag ctg gag gac aag cag cct ggg aac atg gcg ggg aac   1206
Glu Val Phe Lys Leu Glu Asp Lys Gln Pro Gly Asn Met Ala Gly Asn
        295                    300                    305

ttc aac ctc tct ctg caa ggc tgt gac caa gat gcc caa agt cca ggg   1254
Phe Asn Leu Ser Leu Gln Gly Cys Asp Gln Asp Ala Gln Ser Pro Gly
        310                    315                    320

atc ctc cgg ctg cag ttc caa gtt ttg gtc caa cat cca caa aat gaa   1302
Ile Leu Arg Leu Gln Phe Gln Val Leu Val Gln His Pro Gln Asn Glu
325                    330                    335                    340
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```
agc aat aaa atc tac gtg gtt gac ttg agt aat gag cga gcc atg tca    1350
Ser Asn Lys Ile Tyr Val Val Asp Leu Ser Asn Glu Arg Ala Met Ser
            345                 350                 355


ctc acc atc gag cca cgg ccc gtc aaa cag agc cgc aag ttt gtc cct    1398
Leu Thr Ile Glu Pro Arg Pro Val Lys Gln Ser Arg Lys Phe Val Pro
                360                 365                 370

ggc tgt ttc gtg tgt cta gaa tct cgg acc tgc agt agc aac ctc acc    1446
Gly Cys Phe Val Cys Leu Glu Ser Arg Thr Cys Ser Ser Asn Leu Thr
        375                 380                 385

ctg aca tct ggc tcc aaa cac aaa atc tcc ttc ctt tgt gat gat ctg    1494
Leu Thr Ser Gly Ser Lys His Lys Ile Ser Phe Leu Cys Asp Asp Leu
        390                 395                 400

aca cgt ctg tgg atg aat gtg gaa aaa acc ata agc tgc aca gac cac    1542
Thr Arg Leu Trp Met Asn Val Glu Lys Thr Ile Ser Cys Thr Asp His
405                 410                 415                 420

cgg tac tgc caa agg aaa tcc tac tca ctc cag gtg ccc agt gac atc    1590
Arg Tyr Cys Gln Arg Lys Ser Tyr Ser Leu Gln Val Pro Ser Asp Ile
                425                 430                 435

ctc cac ctg cct gtg gag ctg cat gac ttc tcc tgg aag ctg ctg gtg    1638
Leu His Leu Pro Val Glu Leu His Asp Phe Ser Trp Lys Leu Leu Val
                440                 445                 450

ccc aag gac agg ctc agc ctg gtg ctg gtg cca gcc cag aag ctg cag    1686
Pro Lys Asp Arg Leu Ser Leu Val Leu Val Pro Ala Gln Lys Leu Gln
            455                 460                 465

cag cat aca cac gag aag ccc tgc aac acc agc ttc agc tac ctc gtg    1734
Gln His Thr His Glu Lys Pro Cys Asn Thr Ser Phe Ser Tyr Leu Val
        470                 475                 480

gcc agt gcc ata ccc agc cag gac ctg tac ttc ggc tcc ttc tgc ccg    1782
Ala Ser Ala Ile Pro Ser Gln Asp Leu Tyr Phe Gly Ser Phe Cys Pro
485                 490                 495                 500

gga ggc tct atc aag cag atc cag gtg aag cag aac atc tcg gtg acc    1830
Gly Gly Ser Ile Lys Gln Ile Gln Val Lys Gln Asn Ile Ser Val Thr
                505                 510                 515

ctt cgc acc ttt gcc ccc agc ttc caa caa gag gcc tcc agg cag ggt    1878
Leu Arg Thr Phe Ala Pro Ser Phe Gln Gln Glu Ala Ser Arg Gln Gly
                520                 525                 530

ctg acg gtg tcc ttt ata cct tat ttc aaa gag gaa ggc gtt ttc acg    1926
Leu Thr Val Ser Phe Ile Pro Tyr Phe Lys Glu Glu Gly Val Phe Thr
            535                 540                 545
```

```
gtg acc cct gac aca aaa agc aag gtc tac ctg agg acc ccc aac tgg    1974
Val Thr Pro Asp Thr Lys Ser Lys Val Tyr Leu Arg Thr Pro Asn Trp
    550             555             560

gac cgg ggc ctg cca tcc ctc acc tct gtg tcc tgg aac atc agc gtg    2022
Asp Arg Gly Leu Pro Ser Leu Thr Ser Val Ser Trp Asn Ile Ser Val
565             570             575             580


ccc aga gac cag gtg gcc tgc ctg act ttc ttt aag gag cgg agc ggc    2070
Pro Arg Asp Gln Val Ala Cys Leu Thr Phe Phe Lys Glu Arg Ser Gly
                585             590             595

gtg gtc tgc cag aca ggg cgc gca ttc atg atc atc cag gag cag cgg    2118
Val Val Cys Gln Thr Gly Arg Ala Phe Met Ile Ile Gln Glu Gln Arg
            600             605             610

acc cgg gct gag gag atc ttc agc ctg gac gag gat gtg ctc ccc aag    2166
Thr Arg Ala Glu Glu Ile Phe Ser Leu Asp Glu Asp Val Leu Pro Lys
        615             620             625

cca agc ttc cac cat cac agc ttc tgg gtc aac atc tct aac tgc agc    2214
Pro Ser Phe His His His Ser Phe Trp Val Asn Ile Ser Asn Cys Ser
    630             635             640

ccc acg agc ggc aag cag cta gac ctg ctc ttc tcg gtg aca ctt acc    2262
Pro Thr Ser Gly Lys Gln Leu Asp Leu Leu Phe Ser Val Thr Leu Thr
645             650             655             660

cca agg act gtg gac ttg act gtc atc ctc atc gca gcg gtg gga ggt    2310
Pro Arg Thr Val Asp Leu Thr Val Ile Leu Ile Ala Ala Val Gly Gly
                665             670             675

gga gtc tta ctg ctg tct gcc ctc ggg ctc atc att tgc tgt gtg aaa    2358
Gly Val Leu Leu Leu Ser Ala Leu Gly Leu Ile Ile Cys Cys Val Lys
            680             685             690

aag aag aaa aag aag aca aac aag ggc ccc gct gtg ggt atc tac aat    2406
Lys Lys Lys Lys Lys Thr Asn Lys Gly Pro Ala Val Gly Ile Tyr Asn
        695             700             705

ggc aac atc aat act gag atg ccg agg cag cca aaa aag ttt cag aaa    2454
Gly Asn Ile Asn Thr Glu Met Pro Arg Gln Pro Lys Lys Phe Gln Lys
    710             715             720

ggg cga aag gac aat gac tcc cat gtg tat gca gtc atc gag gac acc    2502
Gly Arg Lys Asp Asn Asp Ser His Val Tyr Ala Val Ile Glu Asp Thr
725             730             735             740

atg gta tat ggg cat ctg cta cag gat tcc agc ggc tcc ttc ctg cag    2550
Met Val Tyr Gly His Leu Leu Gln Asp Ser Ser Gly Ser Phe Leu Gln
                745             750             755
```

```
cca gag gtg gac acc tac cgg ccg ttc cag ggc acc atg ggg gtc tgt    2598
Pro Glu Val Asp Thr Tyr Arg Pro Phe Gln Gly Thr Met Gly Val Cys
                760              765              770

cct ccc tcc cca ccc acc ata tgc tcc agg gcc cca act gca aag ttg    2646
Pro Pro Ser Pro Pro Thr Ile Cys Ser Arg Ala Pro Thr Ala Lys Leu
        775              780              785

gcc act gag gag cca cct cct cgc tcc cct cct gag tct gag agt gaa    2694
Ala Thr Glu Glu Pro Pro Pro Arg Ser Pro Pro Glu Ser Glu Ser Glu
    790              795              800


ccg tac acc ttc tcc cat ccc aac aat ggg gat gta agc agc aag gac    2742
Pro Tyr Thr Phe Ser His Pro Asn Asn Gly Asp Val Ser Ser Lys Asp
805              810              815              820

aca gac att ccc tta ctg aac act cag gag ccc atg gag cca gca gaa    2790
Thr Asp Ile Pro Leu Leu Asn Thr Gln Glu Pro Met Glu Pro Ala Glu
                825              830              835

taa cttgatccat tccagacgct ttgctgagtt tcataaagca gggcactgag         2843
```

acacccgtcc gtgttcctaa ccagaaatcc taaagaagag gaattataca gaaggaacag 2903

caggaggttt tcctggacac cgccaacttc acattgctca gtggactcat tctaagggca 2963

agacattgaa aatgatgaat tccaatctgg atacagtcat gacagctcat gtgctcctca 3023

acttaggctg tgcggttagc cagcctgtaa tgagaggaga gaggcctgag tcacctagca 3083

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acagttccaa ttccaaggag cctacctgag gtcccactc tcactggggt cccaggatg 3203

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caaatgtata accacctagc tcttttcacc tgacttagta ataactcata ctaactggtt 3323

tggatgcctg ggttgtgact tctactgacc gctagataaa cgtgtgcctg tcccccaggt 3383

ggtgggaata atttacaatc tgtccaacca gaaaagaatg tgtgtgtttg agcagcattg 3443

acacatatct gctttgataa gagacttcct gattctctag gtcggttcgt ggttatccca 3503

ttgtggaaat tcatcttgaa tcccattgtc ctatagtcct agcaataaga gaaatttcct 3563

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tagttttctg ttgccactgc aacccattac ttggtagctt aaaaacaaca cattagctta 3743

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tagtcctggg gatcagaatt ccaaaatgga tgtccctgaa tgaaaatcaa ggtgtcagca 3803

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agaggctggc tgcattccca ggctccagtg gctggtcaag cttttctcac atggcatcac 3923

tgtgacactg gccctcccac ttccctcttt gacttacaaa gcccaccagg aagatccagg 3983

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tgttttgttt agcttgcgga ctctaacact taaaaaaacc ccagatcaga agatctggcc 4223

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tttagaaggg gtgtccactt caccaggtca ccacagccca cactacgccc tatcacttcc 4343

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gtgctcacat tacccttttt cttttttttc ttttctttt tcttttttt tttaatgtga 4523

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cttccttagg ctggctactt gtcaccatca ccgacatcac tgttgcctgc aaggacacca 5423

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accagtattt cctggagctg tgcctcagtg aaggggccca gcctgaggaa ccctggctct 5543

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gtgccatttg ttgaagccta ctgcatgcca gcccactgct catccacgtg gtctgccatg 5663

cctacgagga aggccagcgc atgcaggact ggtctctaat gctgtggtca ttgcacagaa 5723

gggaaaggtc tcaaggaaga gtcaactggg acaagcacaa gcccaccgga catggccttg 5783

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accaaaaaac aagtatcaag ctgtttaagt gcttcggcta cttgtcccct ggttcagtag 5963

aggccccggt ttcccagttg ttgactgtga caggctcagc atgggctcag cagatgctgt 6023

cttaatttgt ggatgataca gaaagccagg cttttgggata caagttcttt cctcttcatt 6083

tgatgccgtg cactgtgtga agcagatgtt tttgtccgga aataaaaata atagtcttgg 6143

agtctcgcca aaaaaaaaaa                                              6163
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<210> 4
<211> 836
<212> PRT
<213> Homo sapiens

<400> 4

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Met Ala Gly Leu Asn Cys Gly Val Ser Ile Ala Leu Leu Gly Val Leu
 1               5                   10                  15

Leu Leu Gly Ala Ala Arg Leu Pro Arg Gly Ala Glu Ala Phe Glu Ile
                20                  25                  30

Ala Leu Pro Arg Glu Ser Asn Ile Thr Val Leu Ile Lys Leu Gly Thr
            35                  40                  45

Pro Thr Leu Leu Ala Lys Pro Cys Tyr Ile Val Ile Ser Lys Arg His
        50                  55                  60

Ile Thr Met Leu Ser Ile Lys Ser Gly Glu Arg Ile Val Phe Thr Phe
 65                  70                  75                  80

Ser Cys Gln Ser Pro Glu Asn His Phe Val Ile Glu Ile Gln Lys Asn
                85                  90                  95
```

Ile Asp Cys Met Ser Gly Pro Cys Pro Phe Gly Glu Val Gln Leu Gln
          100   105   110

Pro Ser Thr Ser Leu Leu Pro Thr Leu Asn Arg Thr Phe Ile Trp Asp
      115   120   125

Val Lys Ala His Lys Ser Ile Gly Leu Glu Leu Gln Phe Ser Ile Pro
  130   135   140

Arg Leu Arg Gln Ile Gly Pro Gly Glu Ser Cys Pro Asp Gly Val Thr
145   150   155   160

His Ser Ile Ser Gly Arg Ile Asp Ala Thr Val Val Arg Ile Gly Thr
          165   170   175

Phe Cys Ser Asn Gly Thr Val Ser Arg Ile Lys Met Gln Glu Gly Val
      180   185   190

Lys Met Ala Leu His Leu Pro Trp Phe His Pro Arg Asn Val Ser Gly
      195   200   205

Phe Ser Ile Ala Asn Arg Ser Ser Ile Lys Arg Leu Cys Ile Ile Glu
      210   215   220

Ser Val Phe Glu Gly Glu Gly Ser Ala Thr Leu Met Ser Ala Asn Tyr
225   230   235   240

Pro Glu Gly Phe Pro Glu Asp Glu Leu Met Thr Trp Gln Phe Val Val
          245   250   255

Pro Ala His Leu Arg Ala Ser Val Ser Phe Leu Asn Phe Asn Leu Ser
      260   265   270

Asn Cys Glu Arg Lys Glu Glu Arg Val Glu Tyr Tyr Ile Pro Gly Ser
      275   280   285

Thr Thr Asn Pro Glu Val Phe Lys Leu Glu Asp Lys Gln Pro Gly Asn
      290   295   300

Met Ala Gly Asn Phe Asn Leu Ser Leu Gln Gly Cys Asp Gln Asp Ala
305   310   315   320

Gln Ser Pro Gly Ile Leu Arg Leu Gln Phe Gln Val Leu Val Gln His
          325   330   335

Pro Gln Asn Glu Ser Asn Lys Ile Tyr Val Val Asp Leu Ser Asn Glu
      340   345   350

Arg Ala Met Ser Leu Thr Ile Glu Pro Arg Pro Val Lys Gln Ser Arg
      355   360   365

Lys Phe Val Pro Gly Cys Phe Val Cys Leu Glu Ser Arg Thr Cys Ser

```
        370                    375                    380

Ser Asn Leu Thr Leu Thr Ser Gly Ser Lys His Lys Ile Ser Phe Leu
385                 390                 395                 400

Cys Asp Asp Leu Thr Arg Leu Trp Met Asn Val Glu Lys Thr Ile Ser
                405                 410                 415

Cys Thr Asp His Arg Tyr Cys Gln Arg Lys Ser Tyr Ser Leu Gln Val
                420                 425                 430

Pro Ser Asp Ile Leu His Leu Pro Val Glu Leu His Asp Phe Ser Trp
            435                 440                 445

Lys Leu Leu Val Pro Lys Asp Arg Leu Ser Leu Val Leu Val Pro Ala
    450                 455                 460

Gln Lys Leu Gln Gln His Thr His Glu Lys Pro Cys Asn Thr Ser Phe
465                 470                 475                 480

Ser Tyr Leu Val Ala Ser Ala Ile Pro Ser Gln Asp Leu Tyr Phe Gly
                485                 490                 495

Ser Phe Cys Pro Gly Gly Ser Ile Lys Gln Ile Gln Val Lys Gln Asn
            500                 505                 510

Ile Ser Val Thr Leu Arg Thr Phe Ala Pro Ser Phe Gln Gln Glu Ala
    515                 520                 525

Ser Arg Gln Gly Leu Thr Val Ser Phe Ile Pro Tyr Phe Lys Glu Glu
    530                 535                 540

Gly Val Phe Thr Val Thr Pro Asp Thr Lys Ser Lys Val Tyr Leu Arg
545                 550                 555                 560

Thr Pro Asn Trp Asp Arg Gly Leu Pro Ser Leu Thr Ser Val Ser Trp
                565                 570                 575

Asn Ile Ser Val Pro Arg Asp Gln Val Ala Cys Leu Thr Phe Phe Lys
            580                 585                 590

Glu Arg Ser Gly Val Val Cys Gln Thr Gly Arg Ala Phe Met Ile Ile
    595                 600                 605

Gln Glu Gln Arg Thr Arg Ala Glu Glu Ile Phe Ser Leu Asp Glu Asp
    610                 615                 620

Val Leu Pro Lys Pro Ser Phe His His His Ser Phe Trp Val Asn Ile
625                 630                 635                 640

Ser Asn Cys Ser Pro Thr Ser Gly Lys Gln Leu Asp Leu Leu Phe Ser
            645                 650                 655
```

```
Val Thr Leu Thr Pro Arg Thr Val Asp Leu Thr Val Ile Leu Ile Ala
            660             665             670

Ala Val Gly Gly Gly Val Leu Leu Leu Ser Ala Leu Gly Leu Ile Ile
            675             680             685

Cys Cys Val Lys Lys Lys Lys Lys Lys Thr Asn Lys Gly Pro Ala Val
      690             695             700

Gly Ile Tyr Asn Gly Asn Ile Asn Thr Glu Met Pro Arg Gln Pro Lys
705             710             715             720

Lys Phe Gln Lys Gly Arg Lys Asp Asn Asp Ser His Val Tyr Ala Val
            725             730             735

Ile Glu Asp Thr Met Val Tyr Gly His Leu Leu Gln Asp Ser Ser Gly
            740             745             750

Ser Phe Leu Gln Pro Glu Val Asp Thr Tyr Arg Pro Phe Gln Gly Thr
            755             760             765

Met Gly Val Cys Pro Pro Ser Pro Pro Thr Ile Cys Ser Arg Ala Pro
      770             775             780

Thr Ala Lys Leu Ala Thr Glu Glu Pro Pro Pro Arg Ser Pro Pro Glu
785             790             795             800

Ser Glu Ser Glu Pro Tyr Thr Phe Ser His Pro Asn Asn Gly Asp Val
            805             810             815

Ser Ser Lys Asp Thr Asp Ile Pro Leu Leu Asn Thr Gln Glu Pro Met
            820             825             830

Glu Pro Ala Glu
            835
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<210> 5
<211> 23
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 5
accgcctcaa cttgttcaca tgg   23

<210> 6
<211> 26

<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 6
ctggtctcag gagccagcaa cttgtc   26

<210> 7
<211> 25
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 7
ctcatgacgt ggcagtttgt cgttc   25

<210> 8
<211> 26
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 8
ggctcgctca ttactcaagt caacca   26

<210> 9
<211> 36
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 9
attcgcgact gatgatcgat tttttttttt tttttt   36

<210> 10
<211> 20
<212> DNA

<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 10
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<210> 11
<211> 20
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 11
gagatattag aattctactc   20

<210> 12
<211> 17
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 12
gagtagaatt ctaatat   17

<210> 13
<211> 22
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 13
agtccatgtg aacaagttga gg   22

<210> 14
<211> 20
<212> DNA
<213> Kunstliche Sequenz

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<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 14
aattctccca cctcagcctc                                          20



<210> 15
<211> 22
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 15
aggatgaaaa cgacaatgtg cc                                       22



<210> 16
<211> 21
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 16
agaattgctt gagcccagga g                                        21



<210> 17
<211> 21
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 17
caacttcaca ttgctcagtg g                                        21



<210> 18
<211> 25
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer
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<400> 18
tgagcaagtt cagcctggtt aagtc                                        25
```

```
<210> 19
<211> 26
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<220>
<223> Beschreibung der kunstlichen Sequenz: Primer
```

```
<400> 19
caccgaatac tcataaagaa ggtccc                                       26
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```
<210> 20
<211> 26
<212> DNA
<213> Kunstliche Sequenz
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<220>
<223> Beschreibung der kunstlichen Sequenz: Primer
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<400> 20
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```
<210> 21
<211> 20
<212> DNA
<213> Kunstliche Sequenz
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```
<220>
<223> Beschreibung der kunstlichen Sequenz: Primer
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<400> 21
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```
<210> 22
<211> 19
<212> DNA
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<220>
<223> Beschreibung der kunstlichen Sequenz: Primer
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<400> 22
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<210> 23
<211> 25
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 23
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<210> 24
<211> 19
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 24
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<210> 25
<211> 20
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 25
tgcaggaggc attgctgatg                                          20


<210> 26
<211> 19
<212> DNA
<213> Kunstliche Sequenz

<220>
<223> Beschreibung der kunstlichen Sequenz: Primer

<400> 26
aaatcgtgca cttgcaggc                                           19
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<210> 27
<211> 18
<212> DNA
<213> Kunstliche Sequenz

<220>
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<400> 27
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<210> 28
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<210> 29
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<210> 30
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<210> 32
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<220>
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<210> 33
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<210> 34
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<210> 35
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<210> 36
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<220>
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<400> 36
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<210> 37
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<220>
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<400> 37
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<210> 39
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<220>
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<400> 39
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<210> 40
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<220>
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gaactgtaat gttgctttct cgtggca   27